LISTING OF CLAIMS

Claims 1-2 (cancelled)

3. (Currently Amended) A method for controlling fluid flow to and from an eye during ophthalmic surgery, said method composing the steps of:

introducing irrigation fluid into an eye via a bi-directional positive displacement pump;

determining initial irrigation fluid pressure;

adjusting maximum vacuum setting based on the detem1ined initial irrigation fluid pressure;

continuously determining irrigation fluid pressure after the initial determination; and

continuously adjusting maximum vacuum setting based on the continuous determination of irrigation fluid pressure.

Claim 4. (cancelled)

5. (Previously Presented) The method according to claim 3 where determining initial irrigation fluid pressure and continuously determining fluid pressure includes determining in-line irrigation pressure.

Claims 6-22. (cancelled)

23. (Previously Presented) The method according to claim 3 further comprising the step of using a change in irrigation fluid pressure to provide an indication of wound leaking.

Claims 24-28. (cancelled)

29. (Currently Amended) A method for controlling fluid flow to and from an eye during ophthalmic surgery, comprising:

employing a bi-directional positive displacement pump to introduce irrigation fluid into an eye;

determining initial irrigation fluid pressure;

adjusting maximum vacuum setting based on the determined initial irrigation fluid pressure; and

continuously adjusting maximum vacuum setting based on a subsequent continuous determination of irrigation fluid pressure.

30. (Previously Presented) The method according to claim 29 wherein determining initial irrigation fluid pressure and continuous determination includes determining in-line irrigation pressure.

31. (Previously Presented) The method according to claim 29, further comprising using a change in irrigation fluid pressure to provide an indication of wound leaking.

32. (Currently Amended) A method for controlling ocular fluid flow during ophthalmic surgery, comprising:

determining initial irrigation fluid pressure in an eye;

adjusting maximum vacuum setting based on the determined initial irrigation fluid pressure; and

continuously adjusting maximum vacuum setting based on continuously determining irrigation fluid pressure after the initial determination;

wherein said irrigation fluid is introduced to the eye using a bi-directional positive

displacement pump.

33. (Previously Presented) The method according to claim 32 wherein determining initial irrigation fluid pressure and continuously determining irrigation fluid pressure includes determining in-line irrigation pressure.

34. (Previously Presented) The method according to claim 32, further comprising using a change in irrigation fluid pressure to provide an indication of wound leaking.